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Appendix A

Reclamation MP-620 Permit Example

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Permit No. FKC 043007

DEPARTMENT OF THE INTERIOR

BUREAU OF RECLAMATION

PERMIT FOR ADDITIONS OR ALTERATIONS
TO CONVEYANCE AND DISTRIBUTION FACILITIES

1. The Friant Water Authority (___~~District~~/ X Water Authority) "Permittee" requests permission from the Bureau of Reclamation (Reclamation) to document the facilities described below as permanent, which constituted an addition/alteration to the general conveyance system covered by the:

CHECK ONE

___ District's contract with the United States
(No. _____, dated _____); or

X Water Authority's Operation and Maintenance contract with the United States
(No. 8-07-20-XO356, dated March 1, 1998 (as amended)).

a. Location and Description:
Located at the terminus of the Friant-Kern Canal, an existing set of three (3) 24 inch diameter steel siphon pipes on the right side of the canal, and an existing set of four (4) 24-inch diameter steel pipes on the left side of the canal, allow for the metered siphoning of water from the Cross Valley Canal into the Friant-Kern Canal. In total, these seven (7) 24-inch diameter steel pipelines allow for the delivery of up to 70 cubic feet per second into the Friant-Kern Canal for ultimate delivery upstream. This MP 620 Permit is being submitted by the Friant Water Authority to legitimize these existing facilities whose license has expired and to replace generation of licenses for these structures. The attached drawing depicts the existing installation.

b. Purpose:
These two sets of steel pipe/and meter installations allow for the delivery of Cross Valley Canal water into the Friant-Kern Canal for carriage and delivery of water to long term contractors located upstream of the canal's terminus at Kern River. The pipelines were installed in the mid-1980's and are utilized when water supply conditions in the San Joaquin River watershed/storage in Millerton Lake are inadequate to supply full contracted (generally less than 100% Class 1 designations) obligations. Over the years, the subject siphon pipes along with a series of reverse flow pumps installed within the prism of the Friant-Kern Canal, allow delivery of supplementary water to Friant Division Contractors during drought periods.

2. Permittee hereby agrees to indemnify and hold harmless the United States, its agents and employees, from any loss or damage and from any liability on account of personal injury, death, or property damage, or claims for personal injury, death, or property damage of any nature whatsoever and by whomsoever made arising out of the Permittee's activities under this permit.

3. The Permittee agrees that:

a. Additional lands and/or interests in land required for construction, operation and/or maintenance of the described facilities shall be acquired by, and at the expense of, the Permittee and shall be subject to ownership provisions of the contract referenced in Article 1 above. Contact the Land Section for compliance requirements (559) 487-5408 or (559) 478-5504 or (559) 487-5256.

b. Plans for each described facility were submitted to Reclamation (and the Water Authority, if applicable) in adequate detail for review and approval prior to construction of the

facility. Environmental documentation required at the time of construction (mid 1980's) was submitted for review and approval.

c. Each described facility was constructed in accordance with the approved plans in a manner satisfactory to Reclamation (and the Water Authority, if applicable).

d. Title to each facility constructed pursuant to this permit shall be subject to the ownership provisions of the contract referenced in Article 1 above.

e. The Permittee shall maintain each described facility in a manner and condition satisfactory to Reclamation (and the Water Authority, if applicable).

4. The Permittee also agrees to comply with all applicable water laws, ground and air pollution laws and regulations of the United States, State of California, and local authorities.

5. All construction and maintenance activities performed on Reclamation-owned land or facilities are subject to the provisions of Reclamation Construction Safety Standards, Occupational Safety and Health Administration (OSHA) standards, Reclamation Operation and Maintenance Safety Standards, and, in California, California OSHA standards. In case of conflict between standards, the most stringent standards will be followed.

6. Any environmental mitigation measures required will be completed as required by the United States and the State of California.

Name

General Manager
Title

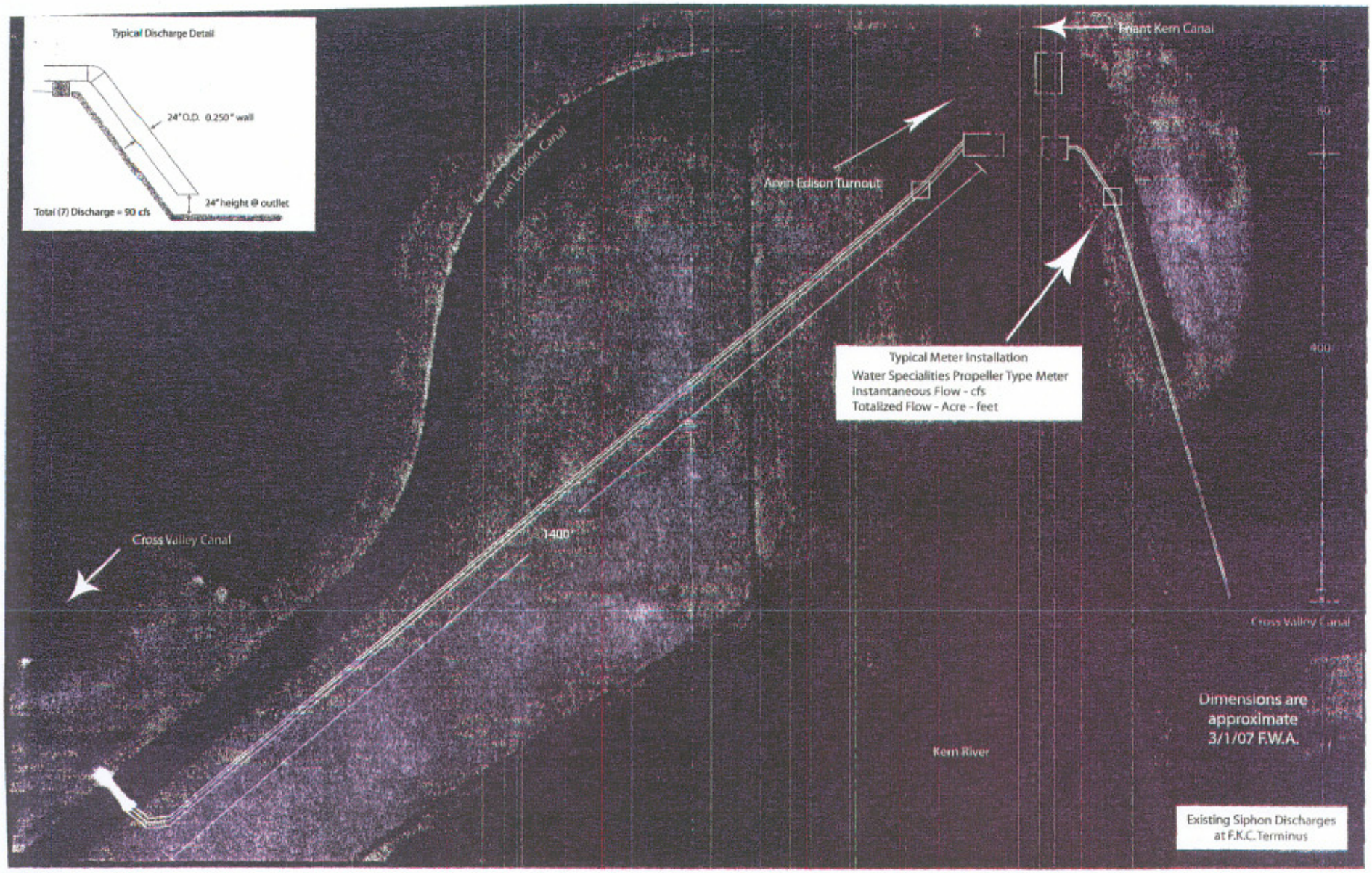
Friant Water Authority
Water Authority

4/23/07
Date

Reclamation hereby recognizes the installation of the facilities herein described as being a legitimate alteration/addition to the Friant-Kern Canal.

Name

4/30/07
Date


Typical Discharge Detail
24" O.D. 0.250" wall
24" height @ outlet
Total (7) Discharge = 90 cfs
Friant Kern Canal
Arvin Edison Canal
Arvin Edison Turnout
Typical Meter Installation
Water Specialities Propeller Type Meter
Instantaneous Flow - cfs
Totalized Flow - Acre - feet
80'
400'
1400'
Cross Valley Canal
Cross Valley Canal
Kern River
Dimensions are approximate 3/1/07 F.W.A.
Existing Siphon Discharges at F.K.C. Terminus

Appendix B

Biological Survey

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M.H. WOLFE *and Associates*
ENVIRONMENTAL CONSULTING INC.

April 26, 2007

Ms. Julie D. Boyle
Provost & Pritchard Engineering Group, Inc.
3500 West Orchard Court
Visalia, CA 93277-7055

Re: **Preconstruction survey of project area for the Cross Valley Canal Intertie, Bakersfield, Kern County, CA.**

Dear Ms. Boyle:

BACKGROUND

At your request, M.H. Wolfe *and Associates* Environmental Consulting Inc., conducted a preconstruction survey of the project area located northwest of the Kern River, northwest of the Arvin Edison Intake Canal, east of Coffee Road and South of Brimhall Road. The site that was surveyed paralleled the intersection of the Friant-Kern Canal and the Arvin-Edison Intake canal on the north side to the Pump Station which intersects Coffee Road. The site is located in Section 33, Township 29 South, Range 27 East, MDB&M, Kern County, California.

METHODS

A species database search for the area determined that San Joaquin kit fox, western burrowing owl, Kern shoulderband, western mastiff bat, Tipton kangaroo rat, American badger, San Joaquin woolly-threads, recurved larkspur, Blunt-nosed leopard lizard, Tulare grasshopper mouse, Hoovers wooly-star, Silvery legless lizard, Bakersfield smallscale, and Mason's neststraw are some of the species with potential to occur on the project site. In order to cover the entire area, meandering pedestrian transects were conducted across the property as well as the perimeter of the site (Figure 1) on 4/16/07 by two qualified biologist. A complete record of the site conditions were made including field notes and photographs.

RESULTS

During previous field surveys for a Biological Assessment conducted by William J. Vanherweg in 2004, potential kangaroo rat burrows at several locations within the Cross

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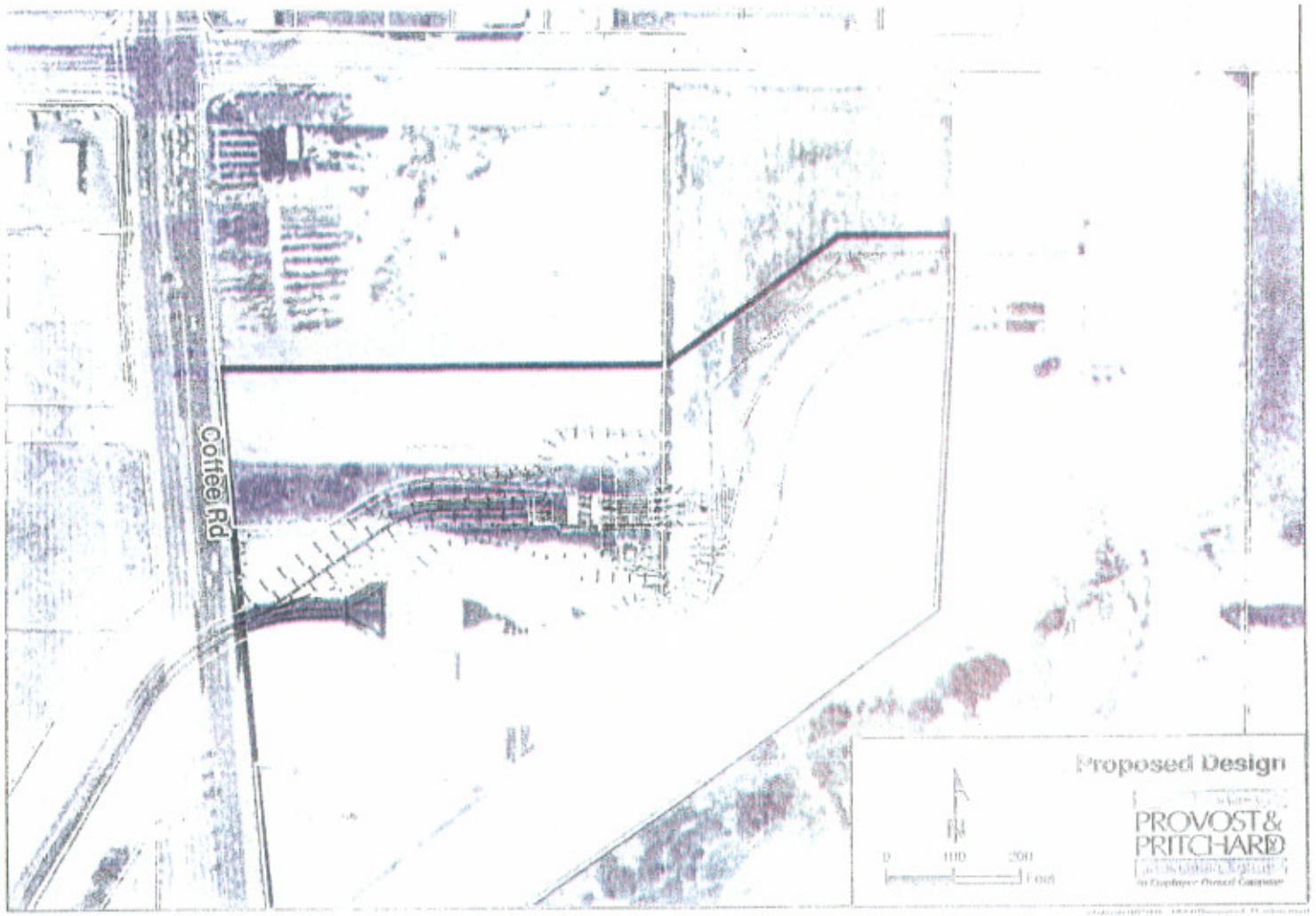
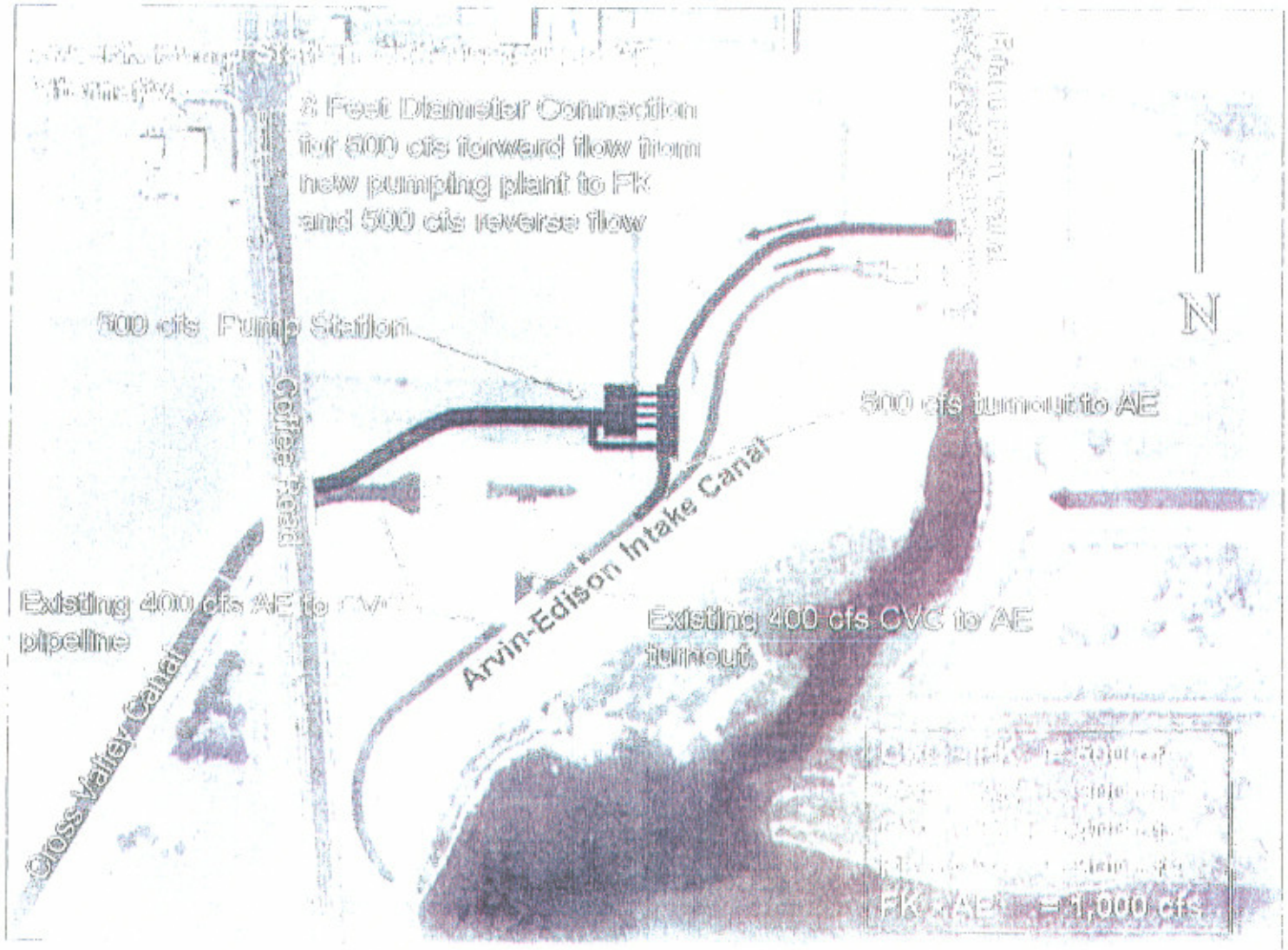


EST. 1988
PROVOST & PRITCHARD INC
ENGINEERING GROUP
An Employee-Owned Company

Area Surveyed

Figure 1- Project Survey Area


2 Feet Diameter Connection
for 500 cfs forward flow from
new pumping plant to FK
and 500 cfs reverse flow
500 cfs Pump Station
N
500 cfs turnout to AE
Existing 400 cfs AE to
pipeline
Arvin-Edison Intake Canal
Existing 400 cfs OVC to AE
turnout
Cross Valley Canal

Valley Canal corridor was observed. A five day trapping survey was conducted in October 2004.

Heermann's kangaroo rat (*Dipodomys heermanni*) and deer mice (*Peromyscus maniculatus*) were trapped. No Tipton kangaroo rats were captured.

The field survey that was conducted by William Vanherweg in 2004 covered most of the project area with exception of about .5 acre of ruderal vegetation. The entire project site is basically void of vegetation which is limited to some non-native grasses that run along the fence lines. Consequently no threatened or endangered plant species were observed during the field survey.

Species that were commonly observed by sign or direct observation included desert cottontail (*Sylvilagus audubonii*), California ground squirrel (*Spermophilus beecheyi*), mourning dove (*Zenaidura macroura*), killdeer (*Charadrius vociferus*), white-crowned sparrow (*Zonotrichia leucophrys*), and house finch (*Carpodacus mexicanus*).

No sign of any threatened or endangered species were observed during the field survey. San Joaquin kit fox (*Vulpes macrotis mutica*) are a state threatened and federally endangered animal that is known to range through the area of the project site. Although none were observed during the survey, this animal may enter the site at any time. No other threatened or endangered species were observed during the survey.

RECOMMENDATIONS

As San Joaquin kit fox are known to occur in the general area, certain precautions should be taken during the project to prevent take:

1) Drive slowly on the project site and prohibit off site driving or operation of equipment of vehicles on the adjacent property that has not been surveyed. Inspect in and under vehicles and equipment prior to moving, as kit fox often enter, sleep under and/or dig under equipment and vehicles.

2) Train employees so they can recognize kit fox dens and know what to do if one is encountered and so they minimize activities that may attract and/or harm the kit fox.

3) Provide ramps in all trenches or excavations greater than two feet in depth, or cover or fence the trenches to prevent entrapment and loss of kit fox. Conduct twice daily inspection of trenches while open and inspect them

4) prior to backfilling to ensure no kit foxes become entrapped. Call a qualified biologist if a kit fox becomes entrapped.

5) Provide for caps or some type of covering on all pipes and tubular goods or other similar openings four inches or greater in diameter to prevent entrapment of kit fox. Inspect pipes prior to welding or closing to ensure no wildlife is entrapped.

6) Keep all plastic trash and foodstuffs in covered or closed containers to preclude attraction of kit fox or other wildlife to the project site where

they may be harmed. Remove solid waste from the project site on a regular basis in accordance with local regulations.

7) Prohibit feeding of wildlife to prevent attracting the kit fox to the project site. No dogs or other pets or guns should be allowed on the project site.

8) Avoid covering or damaging any new burrows that may appear on the project site and call a qualified biologist to determine the appropriate actions to be taken.

9) If a kit fox is encountered on the project site, avoid it and stop any activity that may harm it. Call a qualified biologist to evaluate what action should be taken. Under no circumstances should employees or contractors attempt to harass a kit fox from the project site. This is strictly prohibited. Standard San Joaquin kit fox take avoidance and mitigation measures should be employed.

As a small area of unoccupied habitat is to be converted, compensation should be provided in accordance with the contract Biological Opinion (2001). The simplest manner of doing that could be to pay $1,240 per acre for the project in accordance with the Metropolitan Bakersfield Habitat Conservation Plan (MBHCP), as the contract Biological Opinion (USFWS 2001) provides no take protection for the San Joaquin kit fox. This can be done by a letter to the MBHCP steering committee.

SITE CLEARANCE

This letter should suffice as a San Joaquin kit fox clearance if work begins within 30 days in accordance with the long term contract Biological Opinion (USFWS 2001).

If you have any questions or concerns, please do not hesitate to call us.

Thank you,

Adam J. Grimes
Biologist

Enclosed: Endangered Species Survey Field Completion Form (EPAS)
SJKF take avoidance measures

M.H. WOLFE *and Associates*
ENVIRONMENTAL CONSULTING INC.

ENDANGERED SPECIES SURVEY/FIELD COMPLETION FORM

Date Survey Conducted 4/16/07 **Conducted by:** Adam Grimes & Angel Correa
Conducted for: Provost & Pritchard Engineering Group, Inc.
Project: San Joaquin kit fox clearance survey
Location: Bakersfield, Kern County, California. East of Coffee Road and south of Brimhall Road.

Disturbance: Temporary --- **Permanent** X **Total Acreage:** ____
Total Habitat Affected: Yes **Compensation Required:** None

Endangered Species Present:

Blunt-nosed leopard lizard	NONE	Bakersfield cactus	NONE
Giant kangaroo rat	NONE	Bakersfield saltbush	NONE
San Joaquin antelope squirrel	NONE	California Casbanibus	NONE
San Joaquin kit fox	KNOWN RANGE	Hoover's wooly-star	NONE
Short-nosed kangaroo rat	NONE	Kern mallow	NONE
Tipton kangaroo rat	NONE	San Joaquin wooly threads	NONE

Other species: No other endangered species are currently found to be present on the site.

Species of Concern:

Badger: NONE . Bird Nests: NONE

Notes: No other species of concern were observed on the site.

Habitat:

Native/naturalized 0 Disturbed 100% Free of vegetation 70%
Developed/bladed: X Fallow ag/Active ag: --- Other: None

Special Habitat Present:

Flat-bottom drainage: NONE
Stream alteration/404 permit required NONE
Pond(water): NONE
Raptor nest: NONE

Notes: No dens were present on site.

Archaeological historical findings: None noted
Other: None

Project alteration required: Yes ____ No X

Type: None

Other Concerns: Implement San Joaquin kit fox take avoidance and mitigation measures

Approved for construction as designed or w/alterations above:
Yes X No ____

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U.S. FISH AND WILDLIFE SERVICE
STANDARDIZED RECOMMENDATIONS
FOR PROTECTION OF THE SAN JOAQUIN KIT FOX
PRIOR TO OR DURING GROUND DISTURBANCE

Prepared by the Sacramento Fish and Wildlife Office
June 1999

INTRODUCTION

The following document includes many of the San Joaquin kit fox (*Vulpes macrotis mutica*) protection measures typically recommended by the U. S. Fish and Wildlife Service (Service), prior to and during ground disturbance activities. However, incorporating relevant sections of these guidelines into the proposed project is not the only action required under the Endangered Species Act of 1973, as amended (Act). *Project applicants should contact the Service in Sacramento to determine the full range of requirements that apply to your project; the address and telephone number are given at the end of this document.* Formal authorization for the project may be required under either section 7 or section 10 of the Act. Implementation of the measures presented in this document may be necessary to avoid violating the provisions of the Act, including the prohibition against "take" (defined as killing, harming, or harassing a listed species, including actions that damage or destroy its habitat). Such protection measures may also be required under the terms of a biological opinion pursuant to section 7 of the Act resulting in incidental take authorization (authorization), or an incidental take permit (permit) pursuant to section 10 of the Act. The specific measures implemented to protect kit fox for any given project shall be determined by the Service based upon the applicant's consultation with the Service.

The purpose of this document is to make information on kit fox protection strategies readily available and to help standardize the methods and definitions currently employed to achieve kit fox protection. The measures outlined in this document are subject to modification or revision at the discretion of the Service.

All surveys, den destructions, and monitoring described in this document must be conducted by a qualified biologist. A qualified biologist (biologist) means any person who has

completed at least four years of university training in wildlife biology or a related science and/or has demonstrated field experience in the identification and life history of the San Joaquin kit fox.

In addition, biologist(s) must be able to identify coyote, red fox, gray fox, and kit fox tracks, and to have seen a kit fox in the wild, at a zoo, or as a museum mount.

SMALL PROJECTS

Small projects are considered to be those projects with small foot prints such as an individual in-fill oil well, communication tower, or bridge repair. These projects must stand alone and not be part of, or in any way connected to larger projects (i.e., bridge repair or improvement to serve a future urban development). The Service recommends that on these small projects, the biologist survey the proposed project boundary and a 200-foot area outside of the project footprint to identify habitat features, and make recommendations on

situating the project to minimize or avoid impacts. If habitat features cannot be completely avoided, then preconstruction surveys should be conducted.

Preconstruction/preactivity surveys shall be conducted no less than 14 days and no more than 30 days prior to the beginning of ground disturbance and/or construction activities or any project activity likely to impact the San Joaquin kit fox. Surveys should identify kit fox habitat features on the project site and evaluate use by kit fox and, if possible, and assess the potential impacts to the kit fox by the proposed activity. The status of all dens should be determined and mapped (see Survey Protocol).

Written results of preconstruction/preactivity surveys must be received by the Service within five days after survey completion and prior to the start of ground disturbance and/or construction activities. If a natal/pupping den is discovered within the project area or within 200-feet of the project boundary, the Service shall be immediately notified. If the preconstruction/preactivity survey reveals an active natal pupping or new information, the project applicant should contact the Service immediately to obtain the necessary take authorization/permit.

If take authorization/permit has already been issued, then the biologist may proceed with den destruction within the project boundary, except natal/pupping dens (active or inactive). Protective exclusion zones can be placed around all known and potential dens which occur outside the project footprint (conversely, the project boundary can be demarcated, see den destruction section).

OTHER PROJECTS

It is likely that all other projects occurring within kit fox habitat will require a take authorization/permit from the Service. This determination would be made by the Service during the early evaluation process (see Survey Protocol). These other projects would include, but are not limited to: linear projects; projects with large footprints such as urban development; and projects which in themselves may be small but have far reaching impacts (i.e., water storage or conveyance facilities that promote urban growth or agriculture, etc.).

The take authorization/permit issued by the Service may incorporate some or all of the protection measures presented in this document. The take authorization/permit may include measures specific to the needs of the project, and those requirements supersede any requirements found in this document.

EXCLUSION ZONES

The configuration of exclusion zones around the kit fox dens should have a radius measured outward from the entrance or cluster of entrances. The following radii are minimums, and if they cannot be followed the Service must be contacted:

Potential den 50 feet

Known den 100 feet

Natal/pupping den Service must be contacted

(occupied and unoccupied)

Atypical den 50 feet

Known den: To ensure protection, the exclusion zone should be demarcated by fencing that encircles each den at the appropriate distance and does not prevent access to the den by kit foxes. Exclusion zone fencing should be maintained until all construction related or operational disturbances have been terminated. At that time, all fencing shall be removed to avoid attracting subsequent attention to the dens.

Potential and Atypical dens: Placement of 4-5 flagged stakes 50 feet from the den entrance(s) will suffice to identify the den location; fencing will not be required, but the exclusion zone must be observed.

Construction and other project activities should be prohibited or greatly restricted within these exclusion zones. Only essential vehicle operation on existing roads and foot traffic should be permitted. Otherwise, all construction, vehicle operation, material storage, or any other type of surface-disturbing activity should be prohibited within the exclusion zones.

DESTRUCTION OF DENS

Disturbance to all San Joaquin kit fox dens should be avoided to the maximum extent possible. Protection provided by kit fox dens for use as shelter, escape, cover, and reproduction is vital to the survival of the species. Limited destruction of kit fox dens may be allowed, if avoidance is not a reasonable alternative, provided the following procedures are observed. The value to kit foxes of potential, known, and natal/pupping dens differ and therefore, each den type needs a different level of protection. **Destruction of any known or natal/pupping kit fox den requires take authorization/permit from the Service.**

Natal/pupping dens: Natal or pupping dens which are occupied will not be destroyed until the pups and adults have vacated and then only after consultation with the Service. Therefore, project activities at some den sites may have to be postponed.

Known Dens: Known dens occurring within the footprint of the activity must be monitored for three days with tracking medium or an infra-red beam camera to determine the current use. If no kit fox activity is observed during this period, the den should be destroyed immediately to preclude subsequent use. If kit fox activity is observed at the den during this period, the den should be monitored for at least five consecutive days from the time of the observation to allow any resident animal to move to another den during its normal activity. Use of the den can be discouraged during this period by partially plugging its entrances(s) with soil in such a manner that any resident animal can escape easily. Only when the den is determined to be unoccupied may the den be excavated under the direction of the biologist. If the animal is still present after five or more consecutive days of plugging and monitoring, the den may have to be excavated when, in the judgment of a biologist, it is temporarily vacant, for example during the animal's normal foraging activities. The Service encourages hand excavation, but realizes that soil conditions may necessitate the use of excavating equipment. However, extreme caution must be exercised.

Destruction of the den should be accomplished by careful excavation until it is certain that no kit foxes are inside. The den should be fully excavated, filled with dirt and compacted to ensure that kit foxes cannot reenter or use the den during the construction period. If at any point during excavation a kit fox is discovered inside the den, the excavation activity shall cease immediately and monitoring of the den as described above should be resumed.

Destruction of the den may be completed when in the judgement of the biologist, the animal has escaped from the partially destroyed den.

Potential Dens: If a take authorization/permit has been obtained from the Service, den destruction may proceed without monitoring, unless other restrictions were issued with the take authorization/permit. If no take authorization/permit has been issued, then potential dens should be monitored as if they were known dens. If any den was considered to be a potential den, but is later determined during monitoring or destruction to be currently, or previously used by kit fox (e.g., if kit fox sign is found inside), then destruction shall cease and the Service shall be notified immediately.

CONSTRUCTION AND OPERATIONAL REQUIREMENTS

Habitat subject to permanent and temporary construction disturbances and other types of project-related disturbance should be minimized. Project designs should limit or cluster permanent project features to the smallest area possible while still permitting project goals to be achieved. To minimize temporary disturbances, all project-related vehicle traffic should be restricted to established roads, construction areas, and other designated areas. These areas should also be included in preconstruction surveys and, to the extent possible, should be established in locations disturbed by previous activities to prevent further impacts.

1. Project-related vehicles should observe a 20-mph speed limit in all project areas, except on county roads and State and Federal highways; this is particularly important at night when kit foxes are most active. To the extent possible, night-time construction should be minimized. Off-road traffic outside of designated project areas should be prohibited.

2. To prevent inadvertent entrapment of kit foxes or other animals during the construction phase of a project, all excavated, steep-walled holes or trenches more than 2 feet deep should be covered at the close of each working day by plywood or similar materials, or provided with one or more escape ramps constructed of earth fill or wooden planks. Before such holes or trenches are filled, they should be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the procedures under number 13 of this section must be followed.

3. Kit foxes are attracted to den-like structures such as pipes and may enter stored pipe becoming trapped or injured. All construction pipes, culverts, or similar structures with a diameter of 4-inches or greater that are stored at a construction site for one or more overnight periods should be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe should not be moved until the Service has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved once to remove it from the path of construction activity, until the fox has escaped.

4. All food-related trash items such as wrappers, cans, bottles, and food scraps should be disposed of in closed containers and removed at least once a week from a construction or project site.

5. No firearms shall be allowed on the project site.

6. To prevent harassment, mortality of kit foxes or destruction of dens by dogs or cats, no pets should be permitted on project sites.

7. Use of rodenticides and herbicides in project areas should be restricted. This is necessary to prevent primary or secondary poisoning of kit foxes and the depletion of prey populations on which they depend. All uses of such compounds should observe label and other restrictions mandated by the U.S. Environmental Protection Agency, California Department of Food and Agriculture, and other State and Federal legislation,

as well as additional project-related restrictions deemed necessary by the Service. If rodent control must be conducted, zinc phosphide should be used because of proven lower risk to kit fox.

8. A representative shall be appointed by the project proponent who will be the contact source for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured or entrapped individual. The representative will be identified during the employee education program. The representative's name and telephone number shall be provided to the Service.

9. An employee education program should be conducted for any project that has expected impacts to kit fox or other endangered species. The program should consist of a brief presentation by persons knowledgeable in kit fox biology and legislative protection to explain endangered species concerns to contractors, their employees, and military and agency personnel involved in the project. The program should include the following: a description of the San Joaquin kit fox and its habitat needs; a report of the occurrence of kit fox in the project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of measures being taken to reduce impacts to the species during project construction and implementation. A fact sheet conveying this information should be prepared for distribution to the above-mentioned people and anyone else who may enter the project site.

10. Upon completion of the project, all areas subject to temporary ground disturbances, including storage and staging areas, temporary roads, pipeline corridors, etc. should be re-contoured if necessary, and revegetated to promote restoration of the area to pre-project conditions. An area subject to "temporary" disturbance means any area that is disturbed during the project, but that after project completion will not be subject to further disturbance and has the potential to be revegetated. Appropriate methods and plant species used to revegetate such areas should be determined on a site-specific basis in consultation with the Service, California Department of Fish and Game (CDFG), and revegetation experts.

11. In the case of trapped animals, escape ramps or structures should be installed immediately to allow the animal(s) to escape, or the Service should be contacted for advice.

12. Any contractor, employee, or military or agency personnel who inadvertently kills or injures a San Joaquin kit fox shall immediately report the incident to their representative. This representative shall contact the CDFG immediately in the case of a dead, injured or entrapped kit fox. The CDFG contact for immediate assistance is State Dispatch at (916) 445-0045. They will contact the local warden or biologist.

13. The Sacramento Fish and Wildlife Office and CDFG will be notified in writing within three working days of the accidental death or injury to a San Joaquin kit fox during project related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. The Service contact is the Chief of the Division of Endangered Species, at the addresses and telephone numbers given below. The CDFG contact is Mr. Ron Schlorff at 1416 9th Street, Sacramento, California 95814, (916) 654-4262.

Any project-related information required by the Service or questions concerning the above conditions or their implementation may be directed in writing to the U.S. Fish and Wildlife Service at:

Endangered Species Division
2800 Cottage Way, Suite W2605
Sacramento, California 95825-1846
(916) 414-6620

"Take" - Section 9 of the Endangered Species Act of 1973, as amended (Act) prohibits the "take" of any federally listed endangered species by any person (an individual, corporation, partnership, trust, association, etc.) subject to the jurisdiction of the United States. As defined in the Act, take means " . . . to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." Thus, not only is a listed animal protected from activities such as hunting, but also from actions that damage or destroy its habitat.

"Dens" - San Joaquin kit fox dens may be located in areas of low, moderate, or steep topography. Den characteristics are listed below, however, the specific characteristics of individual dens may vary and occupied dens may lack some or all of these features. Therefore, caution must be exercised in determining the status of any den. Typical dens may include the following: (1) one or more entrances that are approximately 5 to 8 inches in diameter; (2) dirt berms adjacent to the entrances; (3) kit fox tracks, scat, or prey remains in the vicinity of the den; (4) matted vegetation adjacent to the den entrances; and (5) manmade features such as culverts, pipes, and canal banks.

"Known den" - Any existing natural den or manmade structure that is used or has been used at any time in the past by a San Joaquin kit fox. Evidence of use may include historical records, past or current radiotelemetry or spotlighting data, kit fox sign such as tracks, scat, and/or prey remains, or other reasonable proof that a given den is being or has been used by a kit fox. The Service discourages use of the terms "active" and "inactive" when referring to any kit fox den because a great percentage of occupied dens show no evidence of use, and because kit foxes change dens often, with the result that the status of a given den may change frequently and abruptly.

"Potential Den" - Any subterranean hole within the species' range that has entrances of appropriate dimensions for which available evidence is insufficient to conclude that it is being used or has been used by a kit fox. Potential dens shall include the following: (1) any suitable subterranean hole; or (2) any den or burrow of another species (e.g., coyote, badger, red fox, or ground squirrel) that otherwise has appropriate characteristics for kit fox use.

"Natal or Pupping Den" - Any den used by kit foxes to whelp and/or rear their pups. Natal/pupping dens may be larger with more numerous entrances than dens occupied exclusively by adults. These dens typically have more kit fox tracks, scat, and prey remains in the vicinity of the den, and may have a broader apron of matted dirt and/or vegetation at one or more entrances. A natal den, defined as a den in which kit fox pups are actually whelped but not necessarily reared, is a more restrictive version of the pupping den. In practice, however, it is difficult to distinguish between the two, therefore, for purposes of this definition either term applies.

"Atypical Den" - Any manmade structure which has been or is being occupied by a San Joaquin kit fox. Atypical dens may include pipes, culverts, and diggings beneath concrete slabs and buildings.

Appendix C

SJKF Avoidance Measures

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Pictured above is a San Joaquin kit fox (*Vulpes macrotus mutica*) whose movements and habits are being monitored by researchers in an effort to gain information on this endangered species.

Status: The San Joaquin kit fox is listed as "endangered" by the United States Fish and Wildlife Service (USFWS), and as "threatened" by the California Department of Fish and Game (CDFG). Both state and federal law prohibit Take and possession of this species.

Causes of Decline: The principal cause of decline for this species is loss of its valley grassland habitat to agricultural and other land development. Causes of death to individual kit fox, other than natural causes such as predation and disease, include incidental poisoning from pest control programs and illegal shooting and trapping. Kit fox often cross roads and are vulnerable to traffic mortality. In fact, *road kills represent the largest source of reported mortality for the San Joaquin kit fox.*

Where Found: Although low in numbers, the San Joaquin kit fox occurs throughout the San Joaquin Valley from the Tehachapi Mountain foothills surrounding the southern end of the valley, north to Contra Costa County. Preferred habitat is the valley floor with grassland vegetation or nearby rolling hills largely devoid of trees and brush.

Distinguishing Characteristics: The kit fox is the smallest of North American foxes. The San Joaquin kit fox stands only nine to twelve inches tall, and weighs about 5 lbs. It is distinguished by its small size and buff-tan coloration. *Large ears, long legs, and black-tipped tail* are readily recognized. Coyotes and other foxes in the area are larger than the kit fox. The red fox is dark in coloration and has a white-tipped tail. Grey fox are larger with short legs, are more uniformly steel gray in coloration, and have a band of black hair along the top of the tail.

What You Can Do: Be aware of the potential presence of the kit fox. Do not throw food scraps or leave trash lying about. If a kit fox is sighted in the work area, or, if a dead or injured kit fox is encountered, the Bureau of Reclamation biologist, Shauna McDonald (559/487-5202) must be notified immediately. Reports of any other sightings of kit fox will also be

appreciated.

Take Avoidance Measures

The following are CDFG and USFWS-standardized Take Avoidance Measures that shall be incorporated into this project:

In order to minimize the take of listed species, the following measures should be implemented:

1. Construction during evening hours (when kit foxes and kangaroo rats are active and most vulnerable to vehicle or equipment-induced injury or mortality) will be avoided where possible.

2. To prevent entrapment of endangered species or other animals during construction, all excavated, steep-walled holes or trenches in excess of two feet in depth shall be covered at the close of each working day by plywood or similar materials, or provided with one or more escape ramps which shall not be greater than 1000' apart. Trenches shall also be inspected for entrapped wildlife each morning prior to onset of construction and immediately prior to the end of each working day. Before such holes or trenches are filled, they shall be thoroughly inspected for entrapped animals by a designated inspector or qualified biologist. Any animals so discovered shall be allowed to escape before construction activities resume, or removed from the trench or hole by a qualified biologist.

3. All construction pipes, culverts, or similar structures with a diameter of four inches or greater that are stored at a construction site for one or more overnight periods shall be thoroughly inspected for trapped kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If during construction a kit fox is discovered inside a pipe, that section of pipe will not be moved, except at the direction of a Department of Fish and Game Biologist or until the kit fox has escaped.

4. All food-related trash items such as wrappers, cans, bottles, and food scraps generated both during construction and during subsequent facility operation shall be disposed of in closed containers and removed daily from the site. Food items may attract kit foxes onto a project site, consequently exposing such animals to increased risk of injury or mortality. No deliberate feeding of wildlife shall be allowed.

5. Any employee that inadvertently kills or injures a San Joaquin kit fox or blunt-nosed leopard lizard, San Joaquin antelope squirrel or Tipton kangaroo rat, or who finds any such animal dead, injured, or entrapped shall be required to report the incident immediately to the on-site supervisor or biologist. In the case of entrapped animals, escape ramps or structures shall be installed immediately if possible to allow the subject animal(s) to escape unimpeded. In the event that such observations are of injured or dead animals, BOR shall notify the USFWS and CDFG in writing within three working days of the finding of any such animal(s). Notification shall include the date, time, location, and circumstances of the incident. USFWS contacts for this information will be Ms. Susan Moore (916) 414-6702. The CDFG contact will be Mr. Ron Schlorff (916) 654-4262. Any kit fox or leopard lizard found dead or injured shall be turned over immediately to the FWS for care, analysis, or disposition.

6. All known and potential San Joaquin kit fox dens (See Appendix I for definitions) within the construction zone or kit fox dens outside the

construction zone if otherwise authorized, shall be excavated pursuant to conditions described below prior to the onset of construction activities or otherwise protected as specified by FWS. Excavation of *known* kit fox dens should not occur until appropriate consultations are completed and then BOR shall notify USFWS and CDFG of the intent to destroy the subject den or burrow(s) and the reasons why alternate courses of action are not possible. The USFWS may concur or recommend alternate methods to reduce impacts to the den or burrow(s).

Destruction of a potential kit fox den may proceed without notification if no current or previous use of the den by kit foxes is known, as determined by a qualified biologist. However, if during excavation any potential den is determined to be a currently or previously used kit fox den (e.g., if kit fox sign is found inside), CDFG and USFWS will be notified immediately of the change in status.

7. In the event that CDFG and USFWS concurs that a known San Joaquin kit fox den will be unavoidably destroyed by planned project action, the following procedures shall be implemented:

    * Prior to construction, the subject den shall be carefully excavated using hand tools. Excavation will be performed by either a qualified biologist or under the direct supervision of a biologist to ensure that no animals are trapped or injured. Any kit foxes in residence shall be allowed to escape unimpeded.

    * The den shall be completely excavated and then refilled and compacted to prevent future use of the site by resident animals.

    * Documentation of the den loss shall be conveyed in writing to the USFWS, Sacramento Field Office, and to CDFG Fresno and Sacramento Offices.

8. Signs shall be posted and/or fencing shall be placed around work sites to restrict access of vehicles and equipment unrelated to site operations.

9. The South-Central California Area Office shall be informed of upcoming construction activities and avoidance measures to be taken. A qualified biologist may be required to be on the project site during initial ground disturbance activities at each site.

10. All project-related vehicle traffic will be restricted to established roads, construction areas, storage areas, and staging and parking areas. Off-road traffic outside of designated project areas will be prohibited.

11. An employee orientation program for all construction and operation personnel shall be conducted and will consist of a brief consultation in which persons knowledgeable in endangered species biology and legislative protection explain endangered species concerns. The education program will include a discussion of San Joaquin kit fox, Tipton kangaroo rat, and blunt-nosed leopard lizard biology, the habitat needs of these species, their status under the Endangered Species Act, and measures being taken for the protection of these species and their habitats as a part of the project. A fact sheet conveying this information will also be prepared for distribution to all employees.

12. Project-related vehicles shall observe a 25 MPH speed limit in all project areas except on County roads and State and Federal highways.

13. Use of rodenticides and herbicides on the sites shall be permitted only if it is part of a CDFG and USFWS approved management plan or unless such use is otherwise approved on a case-by-case basis. This is necessary to prevent primary or secondary poisoning of endangered species utilizing adjacent habitats, and the depletion of prey upon which kit foxes depend.

14. Boundaries of approved work areas shall be clearly delineated by stakes, flagging, and/or rope or cord to minimize inadvertent degradation or loss of adjacent wildlife habitats during facility construction.

Appendix I—Definitions for Kit Fox Avoidance and Minimization Measures

"Take" - Section 9 of the Endangered Species Act of 1973, as amended (Act) prohibits the "take" of any federally listed endangered species by any person (an individual, corporation, partnership, trust, association, etc.) subject to the jurisdiction of the United States. As defined in the Act, take means "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." Thus, not only is a listed animal protected from activities such as hunting, but also from actions that damage or destroy its habitat.

"Harm" - is defined in the Act to include significant habitat modification or degradation that results in death or injury to a listed species by interfering with essential behavioral patterns such as breeding, foraging, or resting.

"Harass" - is defined in the Act as actions that create the likelihood of injury to listed species to such an extent as to disrupt normal behavior patterns which include, but are not limited to, breeding, foraging, or resting.

"Cumulative Effects" - The cumulative or incremental environmental impact of the effect of the action together with impacts of past, present, and reasonably foreseeable future actions. The action area includes all areas to be affected directly or indirectly by the action, not merely the immediate area involved in the action.

"Dens" - San Joaquin kit fox dens may be located in areas of low, moderate, or steep topography. Den characteristics are listed below, however, the specific characteristics of individual dens may vary and occupied dens may lack some or all of these features. Therefore, caution must be exercised in determining the status of any den. Typical dens may include the following: (1) one or more entrances that are approximately 5 to 8 inches in diameter; (2) dirt berms adjacent to the entrances; (3) kit fox tracks, scat, or prey remains in the vicinity of the den; (4) matted vegetation adjacent to the den entrances; and (5) manmade features such as culverts, pipes, and canal banks.

"Known den" - Any existing natural den or manmade structure that is used or has been used at any time in the past by a San Joaquin kit fox. Evidence of use may include historical records, past or current radiotelemetry or spotlighting data, kit fox sign such as tracks, scat, and/or prey remains, or other reasonable proof that a given den is being or has been used by a kit fox. The Service discourages use of the terms "active" and "inactive" when referring to any kit fox den because a great percentage of occupied dens show no evidence of use, and because kit foxes change dens often, with the result that the status of a given den may change frequently and abruptly.

"Potential Den" - Any subterranean hole within the species' range that has entrances of appropriate dimensions for which available evidence is insufficient to conclude that it is being used or has been used by a kit fox. Potential dens shall include the following: (1) any suitable subterranean hole; or (2) any den or burrow of another species (e.g., coyote, badger, red fox, or ground squirrel) that otherwise has appropriate characteristics for kit fox use.

"Natal or Pupping Den" - Any den used by kit foxes to whelp and/or rear their pups.
Natal/pupping dens may be larger with more numerous entrances than dens occupied exclusively by adults. These dens typically have more kit fox tracks, scat, and prey remains in the vicinity of the den, and may have a broader apron of matted dirt and/or vegetation at one or more entrances. A natal den, defined as a den in which kit fox pups are actually whelped but not necessarily reared, is a more restrictive version of the pupping den. In practice, however, it is difficult to distinguish the two, therefore, for purposes of this definition, either term applies.

"Atypical Den" - Any manmade structure which has been or is being occupied by a San Joaquin kit fox. Atypical dens may include pipes, culverts, and diggings beneath concrete slabs and buildings.

"Habitat" - Habitat refers to the resources and conditions present in an area that; (1) produces occupancy (including foraging areas and dispersal corridors, etc.); or (2) provides potential for occupancy (e.g., listed species who are so reduced in numbers that they cannot use some areas of habitat, but would do so if their numbers were greater and/or they had the opportunity); or (3) was historically occupied; and (4) are important to the survival, reproduction, and/or recovery of the species.

"Habitat Quality" - The quality of the habitat should be considered a continuous variable, ranging from low to medium to high quality habitats, based on the ability to provide resources for survival, reproduction, and recovery,

respectively.

"Habitat Value" - The value of the habitat refers to the importance of the habitat to the recovery of kit foxes. This should be considered a continuum with indefinite boundaries or acreage; low, medium, and high.

Appendix D

Reclamation's Cultural Resources Letter to SHPO and SHPO's Response

From: Amy Barnes
To: Tapia, Judi
Date: 10/10/2007 7:38:38 AM
Subject: Friant-Kern Canal/Cross Valley Canal Intertie Construction Project (07-SCAO-257)

Tracking #07-SCAO-257

Project: Friant-Kern Canal/Cross Valley Canal Intertie Construction Project

Location: Kern County. Gosford 7.5' USGS Quadrangle.
Sec. 33, T. 29 S., R. 27 E., Mount Diablo Meridian

The proposed activities associated with Reclamation to the Friant Water Authority to allow the Kern County Water Agency (KCWA) to connect the FKC with the CVC at their closest point southeast of the intersection of Coffee and Brimhall Roads in the City of Bakersfield will not adversely affect historic properties. The FKC and CVC will be connected via a new turnout and underground pipeline on the FKC that will connect the turnout to a new pump station and junction box on the CVC, which is currently under construction. The proposed pipeline will parallel Arvin-Edison Intake Canal and all associated construction activities will be within the previous foot print of canal construction.

The FKC is one of the primary facilities of the Central Valley Project (CVP) Friant Division that delivers water from Millerton Lake behind Friant Dam to the southern part of the Central Valley. The locally financed CVC, completed in 1975, transports water from the California Aqueduct, a State Water Project (SWP), to the east side of the southern San Joaquin Valley through a series of six pump lifts. The purpose of connecting the two canals is to provide the flexibility to move water between the canals in both directions so that KCWA can better respond to changing water supply conditions and allow their customers and member units to meet their water supply needs.

As part of the CVP, the FKC has been found eligible for inclusion in the NRHP under Criterion A for its role as a feature that facilitated the expansion of irrigated lands on the east side of the south-central portions of the Central Valley. Reclamation determined that the FKC will not be affected by the installation of another turnout and pipeline as the design of the turnout is consistent with the purpose and function of the FKC. Reclamation consulted with the State Historic Preservation Officer, who concurred on October 2, 2007 (enclosed).

As the proposed action will have no adverse affects to historic properties pursuant to 36 CFR Part 800.5(b), no additional consideration under Section 106 of the National Historic Preservation Act is required.

Thank you for the opportunity to review the undertaking. Please place a copy of this concurrence with the EA.

Amy J. Barnes
Archaeologist
U.S. Bureau of Reclamation
Mid-Pacific Region
2800 Cottage Way, MP-153
Sacramento, CA 95825
916-978-5047
abarnes@mp.usbr.gov

CC: mp153

United States Department of the Interior

BUREAU OF RECLAMATION
Mid-Pacific Regional Office
2800 Cottage Way
Sacramento, California 95825-1898

IN REPLY
REFER TO:
MP-153
ENV-3.00

SEP 1 3 2007

Mr. Milford Wayne Donaldson
State Historic Preservation Officer
Office of Historic Preservation
1416 9th Street, Room 1442-7
Sacramento, California 94296-0001

Subject: Compliance with Section 106 of the National Historic Preservation Act for the Friant-Kern Canal/Cross Valley Canal Intertie Construction Project, Kern County, California (Tracking #07-SCAO-257)

Dear Mr. Donaldson:

The Bureau of Reclamation is initiating consultation under Section 106 of the National Historic Preservation Act (NHPA) and seeking your concurrence with our finding of no adverse affects to historic properties for the proposed construction of a turnout and pipeline that will connect the Friant-Kern Canal (FKC) with the Cross Valley Canal (CVC) in Bakersfield, California (Figure 1). Reclamation owns the FKC and the Kern County Water Agency (KCWA) operates and manages the CVC. The proposed construction constitutes an undertaking subject to Section 106 of the NHPA and Reclamation is consulting with your office pursuant to the 36 CFR Part 800 regulations that implement Section 106 of the NHPA.

Reclamation proposes to issue a permit to the Friant Water Authority to allow the KCWA to connect the FKC with the CVC at their closest point southeast of the intersection of Coffee and Brimhall Roads in the City of Bakersfield. The FKC is one of the primary facilities of the Central Valley Project (CVP), Friant Division that delivers water from Millerton Lake behind Friant Dam to the southern part of the Central Valley. The locally financed CVC, completed in 1975, transports water from the California Aqueduct, a State Water Project (SWP), to the east side of the southern San Joaquin Valley through a series of six pump lifts. The purpose of connecting the two canals is to provide the flexibility to move water between the canals in both directions so that KCWA can better respond to changing water supply conditions and allow their customers and member units to meet their water supply needs.

Reclamation has determined that the area of potential effects (APE) includes a 200-foot-wide pipeline corridor extending about 900 feet from the proposed turnout on the FKC to the new junction box on the CVC located in sec. 33, T. 29 S., R. 27 E., as depicted on the Gosford 7.5' USGS Quadrangle (Figure 2). The new turnout on the FKC will be about 75 feet from the Arvin-Edision Intake. The piped turnout will be approximately 23 feet wide and located mostly under the water line. About 880 feet of eight-foot-diameter underground pipeline will be installed to connect the turnout to a new pump station and junction box on the CVC, which is currently under construction. The proposed pipeline will parallel Arvin-Edison Intake Canal, and all associated construction activities will be within the previous footprint of canal construction. A portion of the APE is located on City of Bakersfield property, which is leased to a landscaping company for storage.

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The APE in located in an area of convergence for a number of canals and the Kern River. The right-of-way for the FKC and Arvin-Edison Intake Canal consists of fill and is heavily disturbed as a result of construction, operation, and maintenance activities, precluding the presence of intact archaeological deposits in the APE. The new piped turnout will be identical to the existing turnouts on the opposite side of the canal. The purpose and function of the FKC will not be affected by the installation of another turnout and pipeline.

A Reclamation Archaeologist conducted a site inspection of the APE on August 6, 2007. The FKC is the only historic property identified in the APE. Completed in 1951, as the longest lined canal in the West, the Friant-Kern Canal carries water via gravity feed 151.8 miles from its outlet works at Friant Dam on the San Joaquin River to its terminus at the Kern River, four miles west of Bakersfield. The water is used for supplemental and new irrigation supplies in Fresno, Tulare, and Kern counties. Almost 85 percent of the canal is concrete lined and it is the longest lined canal in the West. Reclamation is in the process of nominating the CVP to the National Register of Historic Places (NRHP). As part of the CVP, the FKC has been found eligible for inclusion in the NRHP under Criterion A for its role as a feature that facilitated the expansion of irrigated lands on the east side of the south-central portions of the Central Valley.

Reclamation determined that it was not necessary to consult with the Indian Tribes regarding this undertaking. The project APE is confined to a historically constructed feature within Reclamation's right-of-way.

Based on the above findings, Reclamation concludes that the FKC will not be adversely affected by constructing a new turnout, measuring station, and pipeline connecting it to the CVC pursuant to 36 CFR Part 800.5(b). Reclamation invites your comments on our efforts to identify historic properties and requests your concurrence with our finding that the undertaking will have no adverse affects to historic properties. Please contact Amy Barnes at 916-978-5047, or (abarnes@mp.usbr.gov) if you have any questions.

Sincerely,

sgd Michael Nepstad
for Susan M. Fry
Regional Environmental Officer

Enclosures

WBR:ABarnes:mvega:13 Sep 07: 916-978-5047
I:\153\Amy\2007 Correspondence\07-SCAO-257\SHPO\CASHPO FKC-CVC Canal Intertie.doc

OFFICE OF HISTORIC PRESERVATION
DEPARTMENT OF PARKS AND RECREATION
P.O. BOX 942896
SACRAMENTO, CA 94296-0001
(916) 653-6624 Fax: (916) 653-9824
calshpo@ohp.parks.ca.gov
www.ohp.parks.ca.gov

October 2, 2007

In Reply Refer To: BUR070914D

Susan M. Fry
Regional Environmental Officer
United States Department of the Interior
Bureau of Reclamation
Mid-Pacific Regional Office
2800 Cottage Way
Sacramento, CA 95825-1898

Re: Friant-Kern Canal/Cross Valley Canal Intertie Construction Project, Kern County, California (Project No. 07-SCAO-257).

Dear Ms. Fry:

Thank you for seeking my comments regarding the Friant-Kern Canal/Cross Valley Canal Intertie Construction Project being proposed in Kern County, California. Pursuant to 36 CFR Part 800 (as amended 8-05-04) regulations implementing Section 106 of the National Historic Preservation Act (NHPA), the Bureau of Reclamation (BUR) is the lead Federal agency for this undertaking and is requesting my comments regarding the effects that the proposed project will have on historic properties. The project, which will be constructed by the Kern County Water Agency (KCWA), consists of the proposed construction of a turnout and pipeline that will connect the Friant-Kern Canal with the Cross Valley Canal (CVC) in Bakersfield, California. The BUR owns the FKC and the KCWA operates and manages the CVC. The BUR proposes to issue a permit to the Friant Water Authority to allow the KCWA to construct the connection facilities at the intersection of Coffee and Brimhall Roads in the City of Bakersfield. This action has been determined by the BUR to be an undertaking pursuant to Section 106 of the NHPA.

The BUR has determined that the Area of Potential Effects consists of a 200-foot wide corridor extending approximately 900 feet from the proposed turnout on the FKC to the new junction box on the CVC. This location is an area of convergence for a number of canals and has been heavily disturbed by construction, operation, and maintenance activities. Approximately 880 feet of eight-foot diameter pipeline will be installed within the footprint of this area disturbed by previous canal construction activities.

The only historic property identified in the project APE was the Friant-Kern Canal, a major component of the Central Valley Project. The FKC was completed in 1951 and spans a distance of 151 miles through Fresno, Tulare, and Kern counties from its diversion works at the Friant Dam on the San Joaquin River. As an important

component of the Central Valley Project (CVP), the FKC has been determined to be eligible for the National Register of Historic Places as a contributing element to the Central Valley Project NRHP Historic District proposed by the BUR and currently under review by my office. The Cross Valley Canal was constructed by the Kern County Water Agency in 1975. The BUR considers the proposed project to be a standard type of operation modification/addition that is required to maintain effective water delivery in its evolving service area, and has determined that the project will constitute no adverse effect to the FKC.

After reviewing your letter and supporting documentation, I have the following comments:

1) I concur that the Area of Potential Effects is appropriate pursuant to 36 CFR Parts 800.4(a)(1) and 800.16(d) and that the efforts made to identify historic properties have been appropriate pursuant to 36 CFR Part 800.4(b).

2) I further concur that a finding of No Adverse Effect is appropriate pursuant to 36 CFR Part 800.5(b).

3) Be advised that under certain circumstances, such as unanticipated discovery or a change in project description, the BUR may have additional future responsibilities for this undertaking under 36 CFR Part 800.

Thank you for seeking my comments and for considering historic properties in planning your project. If you require further information, please contact William Soule, Associate State Archeologist, at phone 916-654-4614 and email wsoule@parks.ca.gov or Amanda Blosser, State Historian, at phone 916-653-9010 and email ablosser@parks.ca.gov.

Sincerely,

Susan K Stratton for

Milford Wayne Donaldson, FAIA
State Historic Preservation Officer

From: Patricia Rivera
To: Tapia, Judi
Date: 6/6/2007 6:35:25 AM
Subject: Re: ITA Review - Friant-Kern/Cross Valley Canal Intertie EA

Judi, I have reviewed the proposed action to physically connect the Friant-Kern Canal (FKC) with the Cross Valley Canal (CVC) at their closest point, southeast of the intersection of Coffee and Brimhall Roads in the City of Bakersfield. The connection would allow flexibility of use for surface water in the project area by connecting the existing Friant-Kern Canal to a recently approved pump station and junction box taking water from the afterbay of Pumping Plant #6 of the Cross Valley Canal. Roughly 880 feet of eight foot diameter underground pipeline would be installed parallel to the Arvin-Edison Intake Canal to provide up to 500 cubic feet per second (cfs) of flow between the FKC and the CVC, in either direction. The turnout would be located mostly under the water line of the canal, and would be roughly 23 feet wide. The interconnection would have a capacity of nearly 500 cfs (323 million gallons of water per day (mgd)), and would take over primary operations from the five existing smaller diameter pipe connections, which have a combined capacity of 100 cfs (65 mgd). Construction of the proposed project would not result in the abandonment or removal of the existing five connections. Rather, the current system, in conjunction with the proposed facilities, would provide functional flexibility during maintenance operations, providing an alternative to moving at least some water most of the time. This report analyzes the construction of the facility only. The current known operational use will be for exchanges associated with the delivery of Central Valley Project (CVP) water to CVP contractors. So-called "Article 5 Exchanges" were evaluated in the environmental document titled "Article 5 Exchanges between Cross Valley Contractors and others 2007", and in the environmental assessment entitled "Cross Valley Canal Unit Long Term Contract Renewal", completed in 2001. I concur the proposed action does not affect Indian Trust Assets. The nearest ITA to the proposed site is approximately 38 miles East and it is a Public Domains Allotment. Patricia

>>> Judi Tapia 6/1/2007 3:39:31 PM >>>
Please review for impacts on Indian trust assets. The ITA Review Request form is the last attachment. Please find supporting info attached!

CA# = A10-1785-8943-332-10-0-0

I appreciate your help! Please let me know if there is anything else I can provide that may assist you.

Judi Tapia
Natural Resources Specialist
US Bureau of Reclamation
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